

IN THE CLAIMS:

Please amend the claims in the subject patent application as follows:

1. (currently amended) A process for producing para-diisopropylbenzene from cumene and propylene, said process comprising the steps of (1) introducing a feed stream into an alkylation zone wherein said feed stream is comprised of cumene and propylene, and wherein said alkylation zone contains an alkylation catalyst; (2) allowing the cumene and propylene in the feed stream to react together to produce a first mixture of para-diisopropylbenzene and meta-diisopropylbenzene; (3) fractionally distilling the mixture of para-diisopropylbenzene and meta-diisopropylbenzene in a fractional distillation step to separate the meta-diisopropylbenzene from the para-diisopropylbenzene; (4) isomerizing the meta-diisopropylbenzene in the presence of a ~~transalkylation~~ an isomerization catalyst to produce a second mixture of para-diisopropylbenzene and meta-diisopropylbenzene; (5) recycling the second mixture of para-diisopropylbenzene and meta-diisopropylbenzene recovered from the ~~transalkylation~~ isomerization step to the fractional distillation step; and (6) recovering the para-diisopropylbenzene that was separated from the meta-diisopropylbenzene by the fractional distillation step; wherein said process is void of benzene.

2. (currently amended) A process for producing para-diisopropylbenzene as specified in claim 1 wherein ~~said process is void of benzene~~ the meta-diisopropylbenzene is isomerized in step (4) in the absence of cumene.

3. (original) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the isomerization step is conducted at a temperature which is within the range of about 350°F to about 460°F.

4. (original) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the alkylation step is conducted at a temperature that is within the range of about 300°F to about 400°F.

5. (currently amended) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the ~~transalkylation~~ isomerization catalyst is an acidic solid oxide catalyst.
6. (currently amended) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the ~~transalkylation~~ isomerization catalyst is a zeolite catalyst.
7. (currently amended) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the ~~transalkylation~~ isomerization catalyst is zeolite ZSM-12.
8. (original) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the alkylation catalyst is an acidic solid oxide catalyst.
9. (original) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the alkylation catalyst is a zeolite catalyst.
10. (original) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the alkylation catalyst is zeolite ZSM-12.
11. (original) A process for producing para-diisopropylbenzene as specified in claim 1 wherein the isomerization step is conducted at a temperature which is within the range of about 365°F to about 430°F.
12. (original) A process for producing para-diisopropylbenzene as specified in claim 11 wherein the alkylation step is conducted at a temperature that is within the range of about 340°F to about 375°F.
13. (currently amended) A process for producing para-diisopropylbenzene as specified in claim 12 wherein the ~~transalkylation~~ isomerization catalyst is a zeolite catalyst.

14. (original) A process for producing para-diisopropylbenzene as specified in claim 13 wherein the alkylation catalyst is a zeolite catalyst.

15. (original) A process for producing para-diisopropylbenzene as specified in claim 14 wherein the isomerization step is conducted at a temperature which is within the range of about 380°F to about 415°F.

16. (original) A process for producing para-diisopropylbenzene as specified in claim 11 wherein the alkylation step is conducted at a temperature which is within the range of about 345°F to about 360°F.

17. (currently amended) A process for producing para-diisopropylbenzene as specified in claim 16 wherein the ~~transalkylation~~ isomerization catalyst is zeolite ZSM-12.

18. (original) A process for producing para-diisopropylbenzene as specified in claim 17 wherein the alkylation catalyst is zeolite ZSM-12.

19-22. (canceled)

23. (currently amended) A process for producing para-diisopropylbenzene from cumene and propylene, said process comprising the steps of (1) introducing a feed stream into an alkylation zone wherein said feed stream is comprised of cumene and propylene, and wherein said alkylation zone contains an alkylation catalyst; (2) allowing the cumene and propylene in the feed stream to react together to produce a mixture of para-diisopropylbenzene and meta-diisopropylbenzene; (3) fractionally distilling the mixture of para-diisopropylbenzene and meta-diisopropylbenzene in a first fractional distillation step to separate the meta-diisopropylbenzene from the para-diisopropylbenzene; (4) isomerizing the meta-diisopropylbenzene in the presence of a ~~transalkylation~~ isomerization catalyst to produce a second mixture of para-diisopropylbenzene and meta-diisopropylbenzene; (5) fractionally distilling the second mixture of para-diisopropylbenzene and meta-diisopropylbenzene produced by the ~~transalkylation~~

isomerization step in a second fractional distillation step to separate the para-diisopropylbenzene from the meta-diisopropylbenzene; (6) recycling the meta-diisopropylbenzene recovered from the second fractional distillation to step 4; and (7) recovering the para-diisopropylbenzene that was separated from the meta-diisopropylbenzene by the first fractional distillation step and the second fractional distillation step; wherein said process is void of benzene.

24-25. (canceled).

26. (new) A process for producing para-diisopropylbenzene as specified in claim 23 wherein the meta-diisopropylbenzene is isomerized in step (4) in the absence of cumene.